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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,496	12/28/2001	Yeh-Hung Lai	81880PAL	8406
7590	09/23/2004		EXAMINER	
			CHANG, VICTOR S	
			ART UNIT	PAPER NUMBER
			1771	
DATE MAILED: 09/23/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/033,496	LAI ET AL.
	Examiner Victor S Chang	Art Unit 1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 22 July 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 2-18 is/are pending in the application.
 4a) Of the above claim(s) 10-17 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 2-9, 18 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Introduction

1. The Examiner has carefully considered Applicants' remarks filed on 7/22/2004.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn. In particular, in view of the terminal disclaimer filed on 2/9/2004, the double patenting rejection over U.S. Patent No. 6,537,656 is withdrawn.

Terminal Disclaimer

4. The terminal disclaimer filed on 7/22/20004 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,537,656 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Objections

5. Claim 18 is objected to because of the following informalities:
In claim 18, last line, please delete "and" after "between". Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 2-9 and 18 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a thermoplastic foam core sheet (paragraph 0022) and a paper base outer layers, does not reasonably provide enablement for "closed cell foam core sheet" and "flange sheet", respectively. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

More particular, in claim 18, the recitation "said base comprises a closed cell foam core sheet ... has a modulus of between 100 and 2758 MPa and a tensile toughness between 0.344 and 35 MPa" is considered to be too broad and in excess of provided enablement in the specification, since the property recitation purports to cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart desired characteristics, but are unobvious to the instantly claimed invention, and the recitation also appears to read upon materials that could not possibly be used to form the contemplated genus or subgenus of articles.

Ex parte Slob (PO BdApp) 157 USPQ 172. Similarly, in the absence of suitable material for the flange sheets, the recitation "said upper and lower flange sheet has a modulus between 1380 and 20000 MPa and a toughness between 1.4 and 210 MPa" is considered too broad and in excess of provided enablement in the specification.

Claim Rejections - 35 USC § 112

6. Claims 2-9 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, substantially for the reasons set forth in section 5 of Paper No. 111503, together with the following additional observations.

For claim 18, with respect to Applicants' response arguing that "The sheet flange of the invention is a flat surface sticking out from the object that makes the object stronger. The Examiner's interpretation that a flange must be on a wheel or pipe shaft is much too narrow. For instance, the common I beam is ordinarily referred to as having flanges" (Remarks, page 2, first full paragraph), the Examiner repeats (see section 4 of Office action dated 4/16/2004) that the phrase "flange sheet" in claim 18 appears to be meaning a "skin layer", "cover layer" or "outer layer", while the accepted meaning of "flange" is "A protruding rim, edge, rib, or collar, as on a wheel or a pipe shaft, used to strengthen an object, hold it in place, or attach it to another object". With respect to Applicants' example that I beam has a flange portion, the Examiner notes that Applicants fail to provide an evidentiary support to point out the "flange" portion an I beam. Presumably, the "flange" refers to the top and bottom reinforcing ends, the Applicants fail to recognize that structurally the end edges of "flange" elements of an I beam "protrude" or "stick out" the middle body of the I beam, whereas the all the layer of the instant invention is "coextensive" (see Figs. 1-3 and 5). As such, the Examiner maintains that the term "flange" in claim 18 is indefinite because the specification does

not clearly redefine the term. It should be noted that where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclam Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999).

Additionally, while the term “caliper” in claim 2 has been amended to “thickness”, the Examiner repeats (see section 4 of Office action dated 4/16/2004) that the term “caliper” in claim 3 is indefinite. The Examiner suggests similar amendment as seen in claim 2.

Finally, the Examiner notes that Applicants’ the property recitations in claim 18, as set forth above in section 6, are also vague and indefinite, because they give no notice as to what constitutes infringement upon the instantly claimed invention. It should be noted that claims merely setting forth physical characteristics desired in article, and not setting forth specific structure and/or compositions which would meet such characteristics, either in the claim or specification, are invalid as vague, indefinite, and functional, since it recites compounds by what it is desired that they do rather than what they are. As such, in the absence of suitable materials in claim 18, it is unclear as to what is the scope of the invention of which Applicant intends to claim. *Ex parte Slob* (PO BdApp) 157 USPQ 172.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VSC
Victor S Chang
Examiner
Art Unit 1771

9/13/2004

Terrel Morris
TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700